



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/526,547

03/03/2005

Jyri Hamalainen

59643.00583

5269

32294 7590 05/27/2009
SQUIRE, SANDERS & DEMPSEY L.L.P.
8000 TOWERS CRESCENT DRIVE
14TH FLOOR
VIENNA, VA 22182-6212

EXAMINER

HERRERA, DIEGO D

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

05/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/526,547

Applicant(s)

HAMALAINEN ET AL.

Examiner

DIEGO HERRERA

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

The rejection is withdrawn due to amendments made to claim 17 to adhere to statutory subject matter.

Response to Arguments

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 7-9,12, and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Parsa et al. (US 6643318 B1).

Regarding claim 1. Parsa et al. discloses a method of initiating a telecommunications uplink from a mobile terminal to a telecommunications network (abstract, title, fig. 7, col. 2 lines: 16-27, 53-64; Parsa et al. teaches uplink between the base station to the mobile terminal), the mobile terminal having a transmission chain including a baseband stage, a power amplification stage (col. 2 lines:53—col. 3 lines: 14, Parsa et al. teaches power levels and maximum number of access preambles) and an antenna (fig. 8 element 309;

Parsa et al. teaches antenna), the method including:

transmitting a preamble signal from the mobile terminal at a first time, the preamble signal being transmitted in accordance with a transmission parameter of the mobile terminal (col. 2 lines: 65—col. 3 lines: 5, Parsa et al. teaches preamble signal signatures sent by mobile terminal to base station which corresponds to the spreading code and/or the scrambling code used by the network to define the selected logical channel at the physical layer of the CDMA network);

determining whether a base station has successfully received the preamble signal and if so, establishing an uplink to the base station on the basis of the first transmission parameter (col. 3 lines: 5-10, Parsa et al. teaches determination means wherein the mobile terminal stops transmitting when access preambles has been picked up and detected by the base station);

in the event it is not determined that a base station has successfully received the preamble signal, changing the transmission parameter, and repeating the transmitting of the preamble signal and the determining whether a base station has successfully received the preamble signal at a time later than the first time (col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station);

wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing the transmission parameter results in an alteration of the signal diversity of one or more preambles as received by the base station at the later time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Regarding claim 9. An apparatus comprising:

a transmission chain including a baseband stage, a power amplification stage (col. 2 lines:53—col. 3 lines: 14, Parsa et al. teaches power levels and maximum number of access preambles) and an antenna (fig. 8 element 309; Parsa et al. teaches antenna); a transmitter configured to transmit a preamble signal in accordance with a transmission parameter of the apparatus mobile terminal at a first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.);

a determiner configured to determine whether a base station has successfully received

the preamble signal and if so, to establish an uplink to the base station on the basis of the first transmission parameter (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.);

in the event it is not determined that a base station has successfully received the preamble signal, a changing unit is configured to change the transmission parameter, and repeat the transmission of the preamble signal and the determination of whether the base station has successfully received the preamble signal at a time later than the first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.)

wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing the transmission parameter results in an alteration of the signal diversity of one or more preambles as received by the base station at the later time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base

station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Regarding claim 17. Parsa et al. discloses a computer program, embodied on a computer-readable medium, the computer program configured to control a processor to perform a method, the method comprising:

a transmission chain including a baseband stage, a power amplification stage (col. 2 lines:53—col. 3 lines: 14, Parsa et al. teaches power levels and maximum number of access preambles) and an antenna (fig. 8 element 309; Parsa et al. teaches antenna); a transmitter configured to transmit a preamble signal in accordance with a transmission parameter of the apparatus mobile terminal at a first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.);

a determiner configured to determine whether a base station has successfully received the preamble signal and if so, to establish an uplink to the base station on the basis of the first transmission parameter (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base

station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.);

in the event it is not determined that a base station has successfully received the preamble signal, a changing unit is configured to change the transmission parameter, and repeat the transmission of the preamble signal and the determination of whether the base station has successfully received the preamble signal at a time later than the first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.)

wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing the transmission parameter results in an alteration of the signal diversity of one or more preambles as received by the base station at the later time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of

the mobile station by changing parameters as mentioned in Parsa et al.).

Regarding claim 18. Parsa et al. discloses an apparatus comprising:

a transmission chain including a baseband stage, a power amplification stage (col. 2 lines:53—col. 3 lines: 14, Parsa et al. teaches power levels and maximum number of access preambles) and an antenna (fig. 8 element 309; Parsa et al. teaches antenna); a transmitter configured to transmit a preamble signal in accordance with a transmission parameter of the apparatus mobile terminal at a first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.);

a determiner configured to determine whether a base station has successfully received the preamble signal and if so, to establish an uplink to the base station on the basis of the first transmission parameter (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.);
in the event it is not determined that a base station has successfully received the

preamble signal, a changing unit is configured to change the transmission parameter, and repeat the transmission of the preamble signal and the determination of whether the base station has successfully received the preamble signal at a time later than the first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.)

wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing the transmission parameter results in an alteration of the signal diversity of one or more preambles as received by the base station at the later time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Consider claim 4. The method according to claim 1, the combination discloses wherein the transmission parameter indicates a frequency band, each preamble being transmitted via the frequency band indicated by the current transmission parameter (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile

station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Consider claim 7. The method according to claim 1, wherein the uplink is established in accordance with the transmission parameter used when the base station successfully received the preamble at the first time or at a later time than the first time (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Consider claim 8. The method according to claim 1, wherein the transmission parameter includes a power level at which each preamble is transmitted, the power level being increased between at least some sequentially adjacent preamble transmissions (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has

not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Consider claim 12. The apparatus according to claim 9, wherein the transmission parameter is configured to indicate a frequency band, each preamble being transmitted via the frequency band indicated by the current transmission parameter (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Consider claim 15. (Currently Amended) The apparatus according to claim 9, wherein the uplink is established in accordance with the transmission parameter used when the base station successfully received the preamble at the first time or at a later time than the first time(col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Consider claim 16. The apparatus according to claim 9, wherein the transmission parameter includes a power level at which each preamble is transmitted, the power

level being increased between at least some sequentially adjacent preamble transmissions (col. 11 lines: 40-56, col. 15 lines: 13-32, Parsa et al. teaches the option when a mobile station does not receive a indication that the base station has received acquisition of the preamble signal it retransmit the access preamble, hence, repeated at a different time a retry to uplink to base station when is determined that base station has not successfully acknowledge the access preamble of the mobile station by changing parameters as mentioned in Parsa et al.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-3, 5-6, 10-11, 13-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Parsa et al. (US 6643318 B1), and in view of Wang et al. (US 7013146 B2).

Consider claim 2. The method according to claim 1, wherein the transmission chain includes at least two antennae, and the transmission parameter determines which of the antennae the preamble is transmitted from (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish link adaptation).

Consider claim 3. The method according to claim 2, wherein the preamble is transmitted from only one of the antennae at a time (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish link adaptation).

Consider claim 5. The method according to claim 1, the combination discloses wherein the transmission chain includes a plurality of antennae in an antenna array (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish uplink adaptation), and directionality of a beam formed by signals transmitted from the array is selected for each preamble transmission based on the transmission parameter.

Consider claim 6. A method according to claim 5, the combination discloses wherein the transmission chain includes a phase shifting means for shifting the phase of the signals supplied to the individual antennae in the antenna array, the phase shifters being controllable on the basis of the transmission parameter (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish uplink adaptation).

Consider claim 10. The apparatus according to claim 9, wherein the transmission chain includes at least two antennae (col. 1 lines: 48-50, Wang et al. teaches multiple input and multiple output antenna processing), and the transmission parameter is configured to determine determines which of the antennae the preamble is transmitted from (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish link adaptation).

Consider claim 11. The apparatus mobile telecommunications terminal according to claim 10, wherein the preamble is transmitted from only one of the antennae at a time (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish link adaptation).

Consider claim 13. The apparatus according to claim 9, wherein the transmission chain includes a plurality of antennae in an antenna array, and directionality of a beam formed by signals transmitted from the array is selected for each preamble transmission based on the transmission parameter (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish uplink adaptation).

Consider claim 14. (Currently Amended) The apparatus according to claim 13, wherein the transmission chain includes a phase shifter configured to shift shifting means for shifting the phase of the signals supplied to the individual antennae in the antenna array, the phase shifters being controllable on the basis of the transmission parameter (abstract, col. 1 lines: 34-63, Wang et al. teaches MIMO devices that select which antennae is to be used to accomplish uplink adaptation).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEGO HERRERA whose telephone number is (571)272-0907. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Herrera/

Examiner, Art Unit 2617

/Lester Kincaid/

Supervisory Patent Examiner, Art Unit 2617